

**ARTHROSCOPIC IMPEDANCE PROBE  
TO DETECT CARTILAGE DEGENERATION**

**SPONSORSHIP INFORMATION**

5 This invention was made with government support under Grant No. AR 42285 awarded by the National Institutes of Health. The government has certain rights in the invention.

**PRIORITY INFORMATION**

This application is a divisional application of Ser. No. 10/324,717 filed  
10 December 19, 2002 which is a divisional application of Ser. No. 09/776,254 filed  
February 2, 2001, which claims priority from provisional application Ser. No.  
60/179,820 filed February 2, 2000.

**BACKGROUND OF THE INVENTION**

The invention relates to the field of non-destructive arthroscopic diagnostic  
15 probes, and in particular to non-destructive arthroscopic diagnostic probes for detecting  
degeneration of articular cartilage utilizing impedance measurements.

**Articular Cartilage**

The function of organs in the human body are a direct consequence of their inherent  
structure. The function of an organ as a whole is more than the sum total of its  
20 individual constituents. Articular cartilage (AC) is a rich and illustrative example. An  
understanding of the composition and physical properties of AC are essential to  
diagnose a disease with any given device to aid in patient care. AC is a dynamic, living  
tissue that responds to stimuli in its environment (i.e. external loading, fluid flow,